TUMOR OF THE CEREBELLUM.[1]

By J. A. BOOTH,

ASST. PHYSICIAN MANHATTAN EYE AND EAR HOSPITAL AND VANDERBILT CLINIC.

THE subject of intracranial growths is of interest to us all; and no one appreciates that fact more than he who is fortunate enough to have such a case under observation. Knowing the importance of faithfully recording and reporting each and every case, especially when an autopsy has been obtained, I take pleasure in presenting the following history.

Sarah D——, aged ten years. Seen in consultation with Doctor Z. S. Webb on February 19, 1888.

Parents healthy; no family history of cancer or tuberculous disease. The child had not had any previous serious illness. When three years old, she fell down a flight of steps, striking her head upon the stone walk. The fall could not have been a serious one, as the parents did not recall the accident until after her death, though questioned carefully before as to traumatism.

About November 1, 1887, the parents noticed that she was losing flesh and becoming very pale.

Ten days later she came in one afternoon, complaining of chilliness and headache, followed by vomiting without any nausea. She slept well that night and seemed perfectly well the next day. On November 15th and 20th she had similar attacks of headache and vomiting. Each attack seemed more severe, and the recovery not so complete. She was also becoming very irritable—did not wish to play, talk or be disturbed. A little later the father thought she carried her head as though the neck was a little stiff.

From January 15, 1888, the child commenced complaining of pain in the back part of head and neck, principally in

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the morning before getting up, but always wanted to be dressed and go down stairs to her meals. She now spent most of the time in her mother's lap. The parents had not noticed any staggering in her gait, nor did she at any time complain of dizziness.

Examination (February 19, 1888).—Child dressed and sitting in mother's lap; head bound with cold compresses. She is dull, listless, complains of severe head pain, and does not like to be disturbed; is too weak and miserable to get down and walk. Speech normal; tongue straight; no tremors; vision seems normal to finger test; pupils dilated; no reaction to light. There is a slight paresis of right external rectus; no nystagmus; no changes in the fundus. Grasp of hands fair; no paresis of face or limbs; knee-jerks absent; no anæsthesia. There is marked sensitiveness to touch all over head, and especially on back of neck, just below occiput. The posterior cervical glands are quite large. Temperature in axilla 101⅘. Pulse 100, irregular.

Diagnosis.—"Tubercular meningitis."

Tumor of the cerebellum was considered; but the absence of optic nerve changes and the presence of an elevated temperature with an irregular pulse, led me to give the former opinion. Besides many of the facts in the previous history of the case I was not able to obtain until later, especially as to the vomiting.

Patient was ordered ten grains of the iodide of potassium in milk every four hours, this dose to be increased five grains each day.

February 24th.—General conditions worse. Pain in head still present; vision same; pupils not so large and react to light. Paresis of ext. rectus has disappeared. Temperature 100; pulse 120; respiration 18. Ophthalmoscope showed beginning optic neuritis; vessels small and indistinct. Is taking to-day thirty-five grains of potassium iodide every three hours in milk. Vomited after second dose. To take grains twenty as before.

March 5th.—First well marked convulsion occurred, which was followed by many others, five or six during the

day. These consisted of tonic spasm of limbs, drawing up of right side of lip and also of nose; left eye wide open and right eye tightly closed. Low moans and sometimes a loud scream would accompany these attacks. Father states that on two occasions only was consciousness entirely lost.

The symptoms certainly point to an intracranial growth, and are probably due to a cerebellar lesion.

March 9th.—Very much prostrated; vomits the iodide, which had been reduced to ten grains every three hours. Temperatrre 100; pulse 118, thready and irregular. Stimulants given as necessary, and patient ordered syr. ferri iodide, twenty drops three times a day; also inunctions of cod liver oil.

March 10th to 20th.—There is a slight improvement. Vomiting ceased; appetite is good; patient swallows her food easily. Convulsive seizures less frequent and less severe. She passes her urine involuntarily and the act is generally accompanied by a seizure as before described.

Examination of Urine—1018, alkaline. Traces of albumen; no sugar or casts. The abdomen, which had been sunken in, rounded out; and the whole body seemed to flesh up once more. She is still very irritable; repeats the words of others and any sounds she hears outside; also uses strong language, quite often saying Devil! and even worse. The use of these expressions quite surprise and shock the parents, who cannot imagine where the child could have heard them.

March 25th.—The only new symptom is dimness of vision; does not distinguish objects beyond four feet. Ophthalmoscopic examination shows advanced atrophy of both optic nerves.

July 1st.—Child is entirely blind; lies most of the time in a semi-comatose state; occasionally attacks of petit-mal. There is now paralysis of right side of face, partial paraplegia and paresis of left arm. The following bulbar symptoms have also appeared: Dullness, impaired articulation, difficult deglutition, and polyuria.

August 1st.—Emaciated to an extreme degree; cannot swallow; is fed with a tube. Left arm and both legs con-

tracted and rigid. There has been a gradual enlargement of head, and there is now some separation of coronal and sagittal sutures. Slight exophthalmus present. Patient died on August 17, 1888.

Autopsy on August 18th, nine hours after death, the head only being examined.

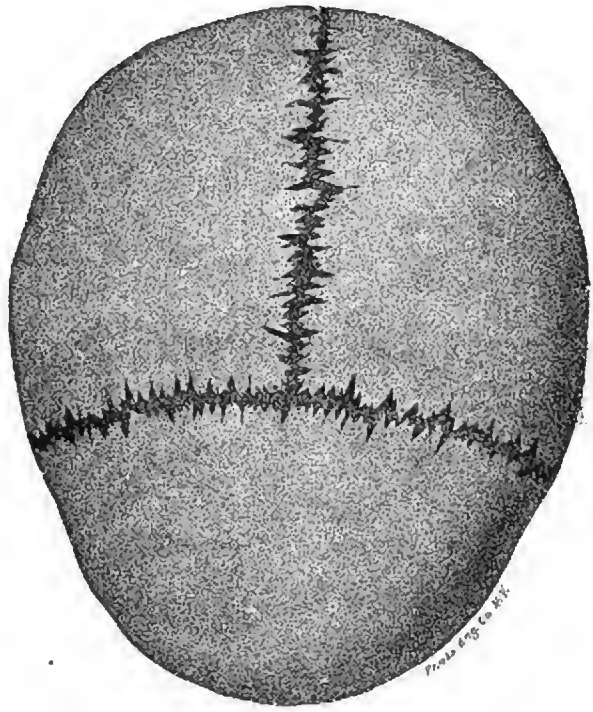

FIG. I.—Degree of separation of the sutures.

The whole head was very much enlarged, the frontal and parietal bones being very thin and separated at the sutures to a marked degree (Fig. 1). The dura mater was very thick and distended. On puncturing this, a large amount of clear fluid gushed out. The convolutions were flattened and whole brain was pale, flabby and softened. The lateral ventricles were very much dilated and contained a large amount of fluid. The medulla was flattened, compressed and softened.

Base of Brain.—Olfactory bulbs normal. Optic nerves small. Other nerves not examined.

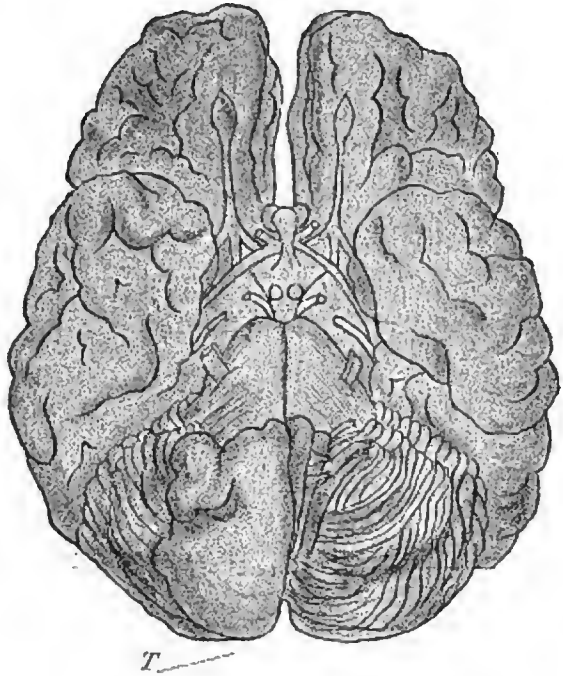

FIG. II.—Base of Brain. *T* points to Tumor in Situ.

Cerebellum.—Fig. 2. Placed directly between the lateral lobes of the cerebellum is a large nodular growth, three inches long, one and one-quarter inches wide, and one and

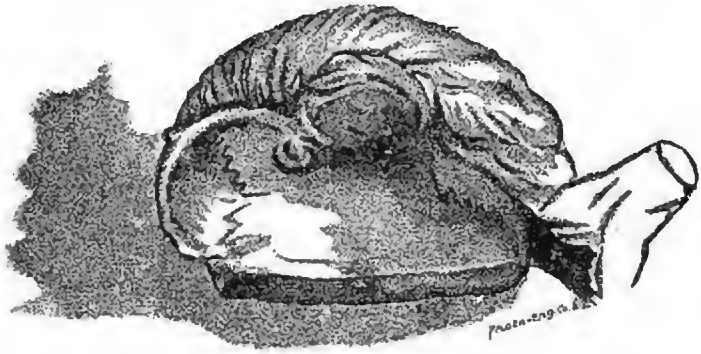

FIG. III.—Depression of Right Lobe of the Cerebellum, into which the Tumor fitted.

one-quarter inches in its vertical diameter. It extends into and is attached to the right lobe of the cerebellum, occupying quite an extensive hollowed out space in this lobe (Fig. 3). The growth also extended into the fourth ventricle, pushed the medulla to the left, and pressed on the right crus of the cerebellum.

Dr. Frank Ferguson makes the following report of the microscopical appearances of the tumor:

"The tumor is nodular in outline, in places cystic. Examination shows a large number of spindle cells, medium in size, imbedded in an abundant granular and fibrillated stroma, with a rich vascular supply. The walls, being composed of embryonic tissue, are quite thick and give the tumor the appearance of angio-sarcoma.